

In the Claims

1 1. (Amended) A method of communicating over a plurality of different target media,
2 comprising:

3 providing, for each of the plurality of different target ~~busses~~media, a plurality of
4 communication element types, each communication element type being a user-definable
5 data structure structured to that pertains to ~~represent~~ a particular protocol layer ~~a~~ of the
6 respective target communication medium,

7 wherein at least one of the plurality of communication element types is included
8 by reference in greater than one other of the plurality of communication element types.

1 2. (Original) A method as recited in claim 1, wherein instances of each communication
2 element type can be created for exchanging data on the respective target medium.

1 3. (Original) A method as recited in claim 1, further comprising defining the plurality of
2 communication element types responsive to exchanges allowed by the protocol of the
3 respective target medium.

1 4. (Original) A method as recited in claim 1, further comprising:

2 creating an instance of at least one of the plurality of communication element
3 types; and

4 processing the instance of the communication element type for exchanging
5 information on the respective target medium.

1 5. (Original) A method as recited in claim 1, wherein the communication element type
2 defines a structure for transmitting data over the target medium.

1 6. (Original) A method as recited in claim 1, wherein the communication element type
2 defines a structure for receiving data over the target medium.

1 7. (Original) A method as recited in claim 1, wherein at least one communication
2 element type is a message type that includes a portion for holding message data
3 associated with instances of the respective message type.

1 8. (Original) A method as recited in claim 7, wherein the message data has a fixed
2 length.

1 9. (Original) A method as recited in claim 7, wherein the message data has a variable
2 length.

1 10. (Original) A method as recited in claim 1, wherein the communication element type
2 has a fixed portion that is the same for all instances of the communication element type.

1 11. (Original) A method as recited in claim 1, wherein any communication element type
2 can be defined in terms of other communication element types.

1 12. (Original) A method as recited in claim 1, wherein the plurality of communication
2 element types includes at least one message type, and each instance of the message type
3 includes a portion for prescribing timing.

1 13. (Original) A method as recited in claim 12 wherein the timing includes a setting for
2 specifying a pre-message gap.

1 14. (Original) A method as recited in claim 12, wherein the timing includes a setting for
2 specifying a pre-word gap.

1 15. (Original) A method as recited in claim 12, wherein the timing includes a setting for
2 specifying a begin message timeout.

1 16. (Original) A method as recited in claim 12, wherein the timing includes a setting for
2 specifying a trailing gap.

1 17. (Amended) A method of structuring communications over a communication
2 medium having a known protocol, comprising:

3 providing at least one user-definable communication element type for at least one
4 layer of a generalized communication model, each communication element type having a
5 user-definable structure that ~~is adaptable for representing~~ pertains to a corresponding
6 layer of the protocol;

7 creating an instance of the at least one user-definable communication element
8 type; and

9 varying at least one characteristic of the instance to determine a susceptibility of
10 equipment operatively connected to the target medium to the varied characteristic.

1 18. (Amended) A method as recited in claim 17, wherein ~~the at least one~~
2 ~~characteristic includes a timing characteristicspecific instances of the communication~~
3 ~~element types can be created for representing transactions over the medium.~~

1 19. (Amended) A method of creating an interface with a communication medium
2 having a protocol, comprising:

3 ~~creating at least one a plurality of user-definable communication element types for~~
4 ~~representing different at least one layers of a generalized communication model, wherein~~
5 ~~at least one of the plurality of communication element types is included by reference in~~
6 ~~greater than one other of the plurality of communication element types;~~

7 ~~structuring each at least one user definable communication element type to~~
8 ~~substantially represent the protocol of the medium at the respective layer of the~~
9 ~~generalized communication model; and~~

10 ~~saving the at least one user-definable communication element type in a computer~~
11 ~~readable format that can be accessed for communicating over the medium; and~~

12 ~~instantiating one or more of the plurality of communication element types to~~
13 ~~create specific instances of communications over the communication medium.~~

1 20. (New) A method as recited in claim 1,
2 wherein the plurality of user-definable communication element types include
3 message types, word types, and field types,
4 wherein at least one message type includes a reference to at least one word type,
5 and
6 wherein at least one word type includes a reference to at least one field type.